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TO THE EDITOR, *Genitourinary Medicine*

Assessment of new enzyme immunoassay to detect herpes simplex virus antigen

Sir,

We report our assessment of a new enzyme immunoassay to detect herpes simplex virus (HSV), the IDEIA HSV test (Boots-Celltech Diagnostics, Slough, Berkshire, UK), compared with the results obtained with a culture amplified enzyme immunoassay (CAEIA). The CAEIA has been shown to be reliable for detecting[1,2] and typing[3,4] HSV.

Clinically suspect lesions were rubbed with a cotton tipped swab, which was immediately inoculated into virus transport medium (VTM). On receipt, the samples were inoculated into Vero tissue culture tubes and stored at −20°C until tested by the IDEIA. Results of the IDEIA were reported as positive, negative, or inconclusive, according to the manufacturer's instructions.

A 0·5 ml volume of vortexed VTM was inoculated into Vero tissue culture tubes and incubated for seven days at 37°C, after which the tubes were vortexed for 15 seconds and frozen at −20°C to lyse the culture cells. Next day the samples were thawed at room temperature and enzyme immunoassay performed on the lysates according to the method of Smith *et al.*[3] A Biotek EL-310 microplate reader (Biotek Instruments, Burlington, USA) was used to measure the optical densities of the microwells.

We tested 65 samples for the presence of HSV by CAEIA and IDEIA, and the table shows the results of these assays. All samples positive by CAEIA were also positive for cytopathic effect, whereas those negative by CAEIA had negative cytopathic effect.

The sensitivity of the new assay was comparable with that of other commercial assays for detecting HSV.[2,3] When the IDEIA was used in conjunction with the CAEIA, we could report positive results within two days after collecting specimens in 85% of cases, and could confirm them by culture within a further seven days. False positive and false negative IDEIA results were probably due to the presence of non-viable HSV or low levels of HSV antigen. With reduction of culture time for IDEIA positive samples, confirmation and typing can be completed within five days after specimen collection. IDEIA negative samples need to be cultured for seven days to ensure growth of HSV from specimens with low antigen levels. Saving time in notifying positive results is relevant for the administration of specific antiherpetic treatment and for women in the last weeks of pregnancy.

Table *Results of CAEIA and IDEIA assays for HSV in 65 specimens*

CAEIA result	*IDEIA result*		
	Positive	*Borderline*	*Negative*
Positive	35	2	6
Negative	1	2	19

The results obtained show that the IDEIA compares well with the CAEIA and, when performed with the CAEIA, offers rapid and reliable detection and typing of HSV from clinical samples.

Yours faithfully,
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TO THE EDITOR, *Genitourinary Medicine*

Rotavirus diarrhoea in patient with antibody to human immunodeficiency virus (HIV)

Sir,

Diarrhoea caused by rotavirus has been well described in the elderly and in outbreaks, but has only occasionally been described in healthy young adults.[1] We have recently seen a case of diarrhoea caused by rotavirus in a homosexual patient known to be HIV antibody positive.

An insulin dependent diabetic aged 29 presented with a few hours' history of diarrhoea. He had lost more than 10% of his body weight in the previous six months and had cervical and axillary lymphadenopathy. Examination was otherwise normal. In particular, there was no evidence of autonomic neuropathy. His CD_4/CD_8 ratio was 0·8, and his T lymphocyte CD_4 subset count was 277×10^9/l. Stool examination showed the presence of rotavirus both by enzyme linked immunosorbent assay (ELISA) and on electron microscopy. The diarrhoea resolved spontaneously after a few days, and subsequent stool examination failed to show rotavirus. Diarrhoea had started again at follow up two weeks later. Stool electron microscopy then showed coronavirus. Three months later, the patient continues to have diarrhoea, but no pathogens were detectable at the last examination.

Many pathogens have been associated with diarrhoea in patients infected with HIV. The association with rotavirus has not, to our knowledge, been reported previously. We wonder whether this is the first atypical infection in our patient, who otherwise fulfils the criteria for the diagnosis of AIDS related complex but not of AIDS.[2]

Yours faithfully,
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TO THE EDITOR, *Genitourinary Medicine*

Monogamy is . . .

Sir,

With the advent of the acquired immune deficiency syndrome (AIDS), research into the sexual behaviour of homosexual and bisexual men has expanded. How clinicians and researchers ask questions, however, may not bear much relation to the understanding of those questions by patients or respondents.

In a recent study of sexual behaviour and use of condoms of 172 homosexually active men, our research on numbers of partners yielded the following results.[1] Forty one (24%) men responded affirmatively to the question, "Have you been in a monogamous relationship for the past two months (or

longer)?" Comparison of numbers of partners during the same period in monogamous and non-monogamous groups showed means of 6·0 for the "monogamous" group and 6·5 for the non-monogamous group, a non-significant difference. Further exploration showed that 19 (46%) of the 41 "monogamous" respondents reported having more than one different sexual partner in the previous two months.

The most obvious explanation is the assumption that respondents did not understand the word, or else equated monogamy with serial monogamy. Several of the respondents, however, subsequently indicated that they believed that a monogamous relationship, at least within a homosexual context, meant *emotional* rather than *sexual* exclusivity. This clearly has implications for the accuracy of future research in which this type of question is asked (which will probably include most clinical, preventive, and evaluative AIDS research). Such a finding argues for behaviourally measurable questions in sexual research and history taking. The implication of sexual exclusivity must be spelled out clearly in future if misinterpretation is to be avoided.

Yours faithfully,
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Reference

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TO THE EDITOR, *Genitourinary Medicine*

Chancroid in Liverpool

Sir,

Haemophilus ducreyi, the aetiological agent of chancroid, has been the subject of renewed interest in England and overseas,[1-3] largely because of the development of selective media to isolate successfully this fastidious organism. We decided to assess the incidence and epidemiology of chancroid in patients attending the sexually transmitted disease clinic at the Royal Liverpool Hospital. This information was essential to assess the need for routine culturing for *H ducreyi* in patients presenting with genital ulceration in Liverpool.

We studied all new male and female patients presenting with genital ulcer(s) on three days a week, during an 18 month period. They consisted of 52 men (median age 25) and 27 women (median age 24).

After obtaining the relevant history, we examined each patient. The laboratory methods included examination by dark field microscopy for *Treponema pallidum*, culture for herpes simplex virus, *H ducreyi*, and other organisms, and the routine tests for other sexually transmitted diseases including serological tests for syphilis.

For *H ducreyi*, the culture medium consisted of Difco GC agar base enriched with 10% chocolatised horse blood and 1% IsoVitalex. One plate was made selective by adding 3 μg/ml vancomycin and 12·5 units/ml mycostatin. The culture plates were immediately incubated at 35°C in a moist atmosphere containing 5–10% carbon dioxide. The plates were examined for growth at 48 hours and thereafter daily for seven days. *H ducreyi* was identified on the basis of characteristic colonial morphology, Gram stained smears of colonies, negative results to the catalase test, and positive results to the oxidase, alkaline phosphatase, and nitrate reductase tests. The isolates were examined for β lactamase production by the chromogenic cephalosporin test, and were also subjected to disc susceptibility tests.

The table shows the results of dark field examination and serological tests for syphilis and the isolation of herpes simplex virus and *H ducreyi*.

Two of the three men (all white) with chancroid were seamen (one with the Royal Navy and the other a Yugoslavian), and all three had had sexual intercourse in countries where chancroid is known to be endemic (the Caribbean, Ethiopia, and Sri Lanka). The only female patient whose ulcers yielded *H ducreyi* was a prostitute whose clients included a West African and a Chinese man in Liverpool and an Arab in North America.

All the *H ducreyi* strains were β lactamase producing and sensitive to augmentin, erythromycin, co-trimoxazole, and trimethoprim, but were resistant to amoxycillin and in three patients also resistant to tetracycline.

Only two patients had mixed infections. One was a Brazilian seaman with a single tender indurated ulcer on the coronal sulcus, which was infected with *T pallidum* and herpes simplex virus. The other patient's ulcer harboured an unusual combination of herpes simplex virus and *Neisseria gonorrhoeae*. Herpes simplex virus was not isolated from any of the patients with chancroid.

Table *Positive results of dark field examination for Treponema pallidum, serological tests for syphilis, and isolation of herpes simplex virus and Haemophilus ducreyi from men and women presenting with genital ulceration*

Test or organism isolated	*Men (n = 52)*	*Women (n = 27)*
Dark field examination for *T pallidum*	1	0
Serology for syphilis	1	0
Herpes simplex virus	26	14
H ducreyi	3	1

The two seamen infected in the Caribbean and Ethiopia and the female prostitute had not responded to prior treatment with tetracycline or penicillin, or both, and were successfully treated with a course of co-trimoxazole (trimethoprim 80 mg/sulphamethoxazole 400 mg) two tablets twice daily for 10 days. The *H ducreyi* strains from all these patients were found to be resistant to tetracycline. The fourth patient, a man infected in Sri Lanka, was cured with erythromycin 500 mg four times daily for seven days.

Our results agree with those in Mallard *et al*[4] and Diaz-Mitoma *et al*,[5] but contrast with those from Sheffield, where *H ducreyi* was often present in association with herpes simplex virus.[3] There was no doubt that *H ducreyi* was a primary pathogen in our patients. Furthermore, all these four patients had an epidemiological link with countries where chancroid is common.

We conclude that *H ducreyi* infection is not indigenous in Liverpool, where the organism need only be sought in patients with genital ulceration acquired in areas where chancroid is known to be endemic.

Your faithfully,
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